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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/715,335	11/17/2003	Jia Hong Yin	7220-X03-057	2388

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EXAMINER

JOHNS, ANDREW W

ART UNIT

PAPER NUMBER

2621

DATE MAILED: 11/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/715,335	Applicant(s) YIN	
	Examiner Andrew W. Johns	Art Unit 2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 May 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|-----------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Rejections - 35 U.S.C. § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. § 112:

5 The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-16 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

10 The recitations of “processing means for processing said signals” at lines 3-4 of claim 1 and of “means for utilizing said criteria” at lines 4-5 of claim 1 each invokes the sixth paragraph of 35 U.S.C. § 112 through the use of the language “means for” and therefore are directed towards the structure disclosed for performing these functions. However, upon careful review of the disclosure, there does not appear to be any specific apparatus disclosed for performing these
15 particular claimed functions. Because the claims are limited to specific apparatus elements in accordance with the sixth paragraph of 35 U.S.C. § 112, and further because the disclosure fails to clearly point out the specific apparatus for performing these functions, these recitations fail to particularly point out and distinctly claim applicant’s invention. See M.P.E.P. § 2181.

20 In claim 2, the recitation of “said indications” lacks adequate support in the preceding claim language because the earlier claim language only defines a single indication, which fails to support this reference to plural indications. Therefore, it is unclear what other indications are referred to or included by this claim language.

 Claim 7 provides a list that are supposed to define the possible categories that into which objects can be classified. However, each of the elements in the list represents a number, and it is

unclear how these numbers serve as categories into which the objects are classified. The exact relationship between these numbers and the objects isn't clear from the claim language, so that this claim fails to clearly point out and distinctly claim the invention.

Finally, the recitation of "objects (e.g. customers)" at line 2 of claim 11 and the recitation of "transportation terminal, such as a railway station or an airport terminal" at line 2 of claim 16 are both indefinite because they fail to clearly establish the metes and bounds of the claimed invention. Specifically, it is unclear if the claims are limited by the exemplary recitations or if they broadly encompass additional subject matter defined by the first term. It is unclear if claim 11 is limited to "customers" or whether other "objects" are included in the scope of the claimed invention. Similarly, the scope of claim 16 could encompass any type of transportation terminal or might be limited to railway stations or airport terminals. Because the exact scope of these claims is unclear, they fail to particularly point out and distinctly claim applicant's invention.

Claims 3-6, 8-10 and 12-15 are variously dependent from indefinite claims and are therefore also indefinite as well.

Claim Rejections - 35 U.S.C. § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-7 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Barnes (WO 98/08208 A2).

With respect to claim 1, Barnes teaches a system comprising video means sited to view an area of interest (10 in Figure 1, for example), and means for generating electrical signals representing video image of said area (analogue to digital converter 21 in Figure 1 which is equivalent to the grabber disclosed by applicant at line 5 of paragraph [00037]), characterized by the provision of processing means for processing said signals (22 in Figure 1) to discern identifiable recognition criteria therefrom (page 5, lines 13-16; detects a variation in grey scale or color in excess of a threshold), means for utilizing said criteria to directly classify, into at least one of a predetermined number of categories, objects entering and/or leaving the area of interest (page 6, lines 17-22; the objects are identified as belonging to one of a plurality of different groups), and means utilizing the classification of said objects to provide an output indication relating respective said objects to respective said categories (page 7, lines 15-16; the system monitors the number, type and direction of shoppers).

In addition, Barnes further teaches that the output indication is combined with other data relative to the environment of the area of interest in order to permit the assimilation of said indication into a wider pattern of data for comparison and evaluation (page 7, lines 17-22), as additionally required by claim 2; that the area of interest comprises a floor area (14 in Figure 1), and the video images are derived, at least in part, from an overhead television camera mounted directly above the floor area (page 4, lines 16-19), as stipulated by claim 3; that the area of interest is located within the entrance/exit area of a supermarket or a department store (page 9, lines 17-21) and that said objects comprise customers and trolleys (page 6, lines 18-21), as set forth in claim 4; and that group detection is carried out to identify whether objects (e.g.

customers) are individuals or part of a group based upon measuring the proximity of people to one another (page 6, lines 21-22), as required by claim 11. Finally, Barnes also teaches that visual information is derived from first and second regions of said area of interest for the purpose of customer classification and counting (page 9, lines 15-21), the information derived from the first region being used for the detection of people at the entrance and their direction of movement (page 10, lines 5-6), and that derived from the second region being used to classify and count them (page 9, lines 22-25), as further required by claim 5; that the information derived from said first region is subjected to processing including bi-directional block matching to detect the direction of motion of objects detected therein (page 7, line 23 through page 8, line 16), as set forth in claim 6; and that the system can track at least one of: number of groups; group sizes (in terms of number of people); number of children; number of adults; number of males with trolley; number of males without trolley; number of females with trolley; number of females without trolley; and number of adults of indeterminate sex (page 6, lines 17-22; page 7, lines 15-16), as required by claim 7. Therefore, Barnes meets each of the limitations of these claims and anticipates the claimed invention.

5. Claims 1 and 16 are rejected under 35 U.S.C. § 102(e) as being anticipated by Yakobi et al. (US 6,697,104 B1).

With respect to claim 1, Yakobi et al. teaches a system comprising video means sited to view an area of interest (12 in Figure 1), and means for generating electrical signals representing video image of said area (video A/D 14 in Figure 1 which is equivalent to the grabber disclosed by applicant at line 5 of paragraph [00037]), characterized by the provision of processing means for processing said signals (18 in Figure 1) to discern identifiable recognition criteria therefrom (204 in Figure 8), means for utilizing said criteria to directly classify, into at least one of a

predetermined number of categories, objects entering and/or leaving the area of interest (206 in Figure 8), and means utilizing the classification of said objects to provide an output indication relating respective said objects to respective said categories (208 in Figure 8). In addition, Yakobi et al. further teaches that the area of interest is associated with a transportation terminal, such as a railway station or an airport terminal (column 1, lines 14-19), as stipulated in claim 16. Therefore, Yakobi et al. meets each of the limitations of these claims and anticipates the claimed invention.

Allowable Subject Matter

6. Claims 8-10 and 12-15 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. § 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Chun et al., Miura and Nakano et al. were each cited in the International Search Report in the parent application and are therefore made of record. Flickner et al. distinguishes between customers and shopping carts, while Ohba et al., Iizaka, Suzuki et al. and Nitta et al. each teaches detecting and monitoring individuals using video images.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Johns whose telephone number is (703) 305-4788. The examiner is normally available Monday through Friday, at least during the hours of 9:00 am to 3:00 pm Eastern Time. The examiner may also be contacted by e-mail using the address: andrew.johns@uspto.gov. (Applicant is reminded of the Office policy regarding e-mail communications. See M.P.E.P. § 502.03)

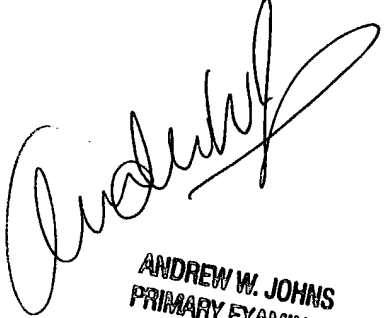
If attempts to reach the examiner are unsuccessful, the examiner's supervisor, Leo Boudreau, can be reached on (703) 305-4706. The fax phone number for this art unit is (703) 872-9306. In order to ensure prompt delivery to the examiner, all unofficial communications should be clearly labeled as "Draft" or "Unofficial."

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center Receptionist whose telephone number is (703) 305-4700.

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A. Johns
29 October 2004



ANDREW W. JOHNS
PRIMARY EXAMINER